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COMMERCIAL BANK CREDIT AND UNEMPLOYMENT RATE IN NIGERIA

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Abstract

Several financial sector reforms have been implemented by the Nigeria government to spur the growth of commercial banks, which in turn is expected to contribute to the reduction in the alarming unemployment rate in Nigeria. Despite the increase in commercial bank credit over the years, unemployment rate has continued to be a menace in the society with its adverse economic and social consequences. Therefore, this study examined the impact of commercial bank credit on unemployment in Nigeria. The study spanned the period 1981 to 2021. The study utilized the autoregressive distributive lag (ARDL) method and the results revealed that commercial bank credit has positive and significant influence on unemployment rate in Nigeria. Thus, the study recommends that credit by commercial bank alone is not sufficient to reduce unemployment; other measures to reduce unemployment should be put in place. More so, measures should be taken to ensure that credits by commercial bank are efficiently and effectively utilized.

1.   Introduction

The international labor organization (ILO), stressed that incessant rising unemployment rate is one the major threats to social stability in many countries (including Nigeria), putting the global rate at 12.6% (ILO, 2012). Unemployment rate is Nigeria is alarming which currently stands at 40.6% (Anozie, 2023). This is higher than other African countries such as South Africa which currently stands at 32.9%, Equatorial Guines 25%, Botswana 24%, Lesotho 22.4% and Gabon 20%. The rising rate of unemployment has been accompanied by several consequences such as depression, mental disorder, increased crime rate, brain drain and decline in national output. In order to address the problem of unemployment and its aftermath issues, successive government or administration have implemented different unemployment policies and programs such as the creation of National Directorate of Employment (NDE) and its skills acquisition programs, NAPEP, PAP, the SURE-P, YOUWIN, just to mention a few. In spite of the emergence of these programs, unemployment rate has soared higher.

More so, the Nigeria government have attempted at curtailing the unemployment rate through appropriate financial policy reforms aimed at strengthening the commercial banks. Such policy reforms include the recapitalization exercise in 2005, the change in the anchored interest rate from minimum rediscount rate to the monetary policy rate in 2006. This is to allow for a more market determined interest rate and ensure efficient allocation of scare financial resource among competing investors. Furthermore, the monetary allowed the establishment of agent banking in mid-2000s to allow for more retail banking and enhance more employment opportunities at the local and remote areas. In addition, the government equally established different specialized financial institutions such as the Peoples Bank in 1988, the community banks and now the micro-finance banks. The banks were aimed at providing financial assistance to the poor in order to boost their activities, which in turn is expected to contribute to reducing the rising unemployment rate in Nigeria.

Despite the above the unemployment rate has refused to nosedive. Thus, in the light of the above disparity

between the volume of commercial bank credit and unemployment rate, this study seeks to empirically examined the extent to which commercial bank credit have influenced unemployment rate in Nigeria. the study covered the time frame of 1981 to 2021.

2. Literature Review

Several empirical studies have analyzed different issues relating to unemployment and commercial bank credit. For instance, Mokuolu and Oluwaleye (2023) investigated the role of small and medium-sized enterprises (SMEs) in reducing unemployment in Nigeria. The study employed the ARDL bound co-integration method and the results established that SMEs contribution to export pose positive insignificant impact on unemployment reduction in the long run and a negative insignificant impact on industrial growth in the short run. The study recommended that government should foster an environment that is favourable to SMEs.

Adeyemo and Olateu (2022) examined the impact of bank lending on business growth in Nigeria. The study employed survey method, and the population of the study covered business men and women in Ibadan North Local Government Area of Oyo State. One hundred and twenty (120) business men and women were selected, and findings of the study established that majority of the respondents agree that lending to SMEs encouraged self-employment thereby reducing the rate of unemployment in Nigeria. More so, the respondents agreed that lending to SMEs boost industrialization as well it improves the economic situation in Nigeria.

Nwamuo (2022) investigated the impact of monetary policy on unemployment rate in Nigeria with data covering 1981 to 2020. The study utilized the Autoregressive Distributed Lag (ARDL) and Error Correction Model (ECM) methods and the results showed that in the short-term prime lending rate had insignificant but positive effect on unemployment rate while interest rate had negative but insignificant influence on unemployment rate. Furthermore, the study noted that in the long-term, prime lending rate had a positive and significant effect on unemployment rate while interest rate had negative and significant effect on unemployment rate in Nigeria. The long-term

estimate established positive but insignificant impact of exchange rate on unemployment rate in Nigeria.

Adejjoh (2021) assessed commercial bank credit to Micro, Small, and Medium Enterprises (MSMEs) and economic growth in Nigeria. The study used the Toda-Yamamoto (T-Y) procedure on data covering the duration 1992 to 2020. The results from the T-Y estimation revealed that there was no causal relationship between commercial bank credit to MSMEs and economic growth in Nigeria. The study concluded that commercial bank credit to MSMEs was inadequate to spur growth.

Oyelade (2019) evaluated the impact of commercial bank credit on agricultural output in Nigeria. The study found a positive significant relationship between commercial bank credit and; output of crop production, livestock production, forestry and fishing in Nigeria. Ono (2017) assessed the finance-growth nexus in Russia using vector auto regression model. The empirical analysis was divided into two major parts: 1999 through 2008 was named subperiod 1, while 2009 through 2014 was named subperiod 2. The first part of the analysis revealed the presence of causality from economic growth to money supply and bank lending, which implies demand-following responses; while the second part of the empirical analysis revealed that economic growth granger causes bank lending although there is no causality from money supply to economic growth.

Using data from 1981 to 2015, Ajayi et al. (2017) examined the impact of agricultural financing policy and deposit money bank loan on agricultural sector productivity in Nigeria. Employing simple linear regression method, the study found that bank loan and agricultural financing policy exerted significant positive effect on agricultural productivity in Nigeria during the period. The results of the study also revealed that lending rate exerts significant negative effect on agricultural output. Odufuye (2017) investigated the impact of bank credit on the Nigerian economy growth from 1992 to 2015. The results showed that commercial bank credits to small and medium scale enterprises, credits to private sector, money supply, and interest rate had insignificant impact on gross domestic product while bank credit instruments jointly significantly influenced gross domestic product.

Sipahutar et al. (2016) explored the effect of commercial bank credit on economic growth, unemployment, and poverty in Indonesia. The study employed Vector Auto-regression (VAR) and Error Correction Model (ECM), and the results showed that there exists bidirectional causality between banks credit and economic growth. Sogules and Nkoro (2016) examined the impact of bank loans to agricultural and manufacturing sectors on the economic growth in Nigeria from 1970 to 2013. The study found that bank loans to agricultural and manufacturing sector have insignificant negative effect on the economic growth in Nigeria.

Mushtaq (2016) established the direction between banks' major activities and economic growth in Pakistan by employing Johansen test of Cointegration and Granger Causality on times series data from 1961 to 2013. The results showed that there is no co-integration or causal relationship between GDP growth and deposits in Banks of Pakistan while there exists short run and long run causality running from GDP growth to bank's lending activities. In China, using data from1978 to 2013, Wang et al. (2015) examined the relationship between financial development and economic growth. Ordinary Least Square (OLS) multiple regression technique was utilized and the result showed that financial development had negative effects on economic growth.

Olowofeso et al. (2015) examined the impacts of private sector credit on economic growth in Nigeria using the Gregory and Hansen (1996) co-integration test and fully modified ordinary least squares from 2000 to 2014. It was found that credit to private sector, government expenditure, and gross capital formation had positive effect on economic growth, while prime lending rate had negative and significant effect on economic growth in Nigeria.

Iwedi et al. (2015) looked into the impact of bank domestic credits on the economic growth of Nigeria using time series data from 1980 to 2013. The results of the study showed that credit to the private sector (CPS) and Credit to the government sector (CGS) had positive and significant effect on gross domestic product in the short run, while bank domestic credit had insignificant effect on gross domestic product in Nigeria in the long run.

Akujuobi and Nwezeaku (2015) examined the effect of bank lending activities on economic development in Nigeria, covering the period 1980-2013. The study utilized the ordinary Least Square (OLS) and Co-integration Techniques. The findings showed that credit had significant effect on economic development.

Nwakanma, Nnamdi, and Omojefe (2014) evaluated the long-run relationship and the directions of prevailing causality between bank credits to the private sector and the nation's economic growth. The study used the Autoregressive Distributed Lag Bound (ARDL) and Granger Causality, and the findings showed that that bank credits have significant long-run relationship with growth but without significant causality in any direction. Ogege and Shiro (2013) in a study covering 1974 to 2010 used co-integration and error correction model, discovered a long-run relationship and concluded that commercial credits contribute positively to growth but is significant in the long run.

The review of literature showed that previous studies have focused largely on the impact of commercial bank credit on economic growth. Thus, absence of studies on the link between commercial bank credit and unemployment, makes it difficult to conclude if commercial bank credit influence unemployment in Nigeria or otherwise. Due to the identified gaps in the literature, this study aims at closing the gap in the literature by examining the impact of commercial bank credit on unemployment and thereby contributing to the existing body of knowledge.

3. Methodology

3.1 Data and Sources

This study utilized annual data series on unemployment (UEMP), commercial bank credit (CBCR), inflation rate (INF), interest rate (INT), lending rate (LDR) and exchange rate (EXR). Data on commercial bank credit, inflation rate, lending rate and exchange rate are sourced from the Central Bank of Nigerian Statistical bulletin, 2021 edition while data on unemployment is sourced from the Nigerian Bureau of Statistics bulletin.

3.2 Model Specification

To examine the impact commercial bank credit on unemployment in Nigeria, the model used in this research work is in line with the model used by Nnabu et al. (2017) in their work on Commercial Bank Credit to small medium scale enterprise and Unemployment Reduction in Nigeria. Their model is shown below:

UMP = f (SML, INT, SVN)   (1)

Where UMP is unemployment rate measured as percentage of number of unemployed to total labor force, SMl is commercial bank credit to SMEs as a percentage of total bank credit to private sector, INT is the prime interest rate, SVN is personal savings measured as total private savings as the ratio of GDP. Modifying the above model in line with the objective of this study gives:

UEMP= f (CBCR, INF, INT, LDR, EXR)   (2)

Expressing equation (2) in econometric form becomes:

$$UEMP = \beta_0 + \beta_1 CBCR + \beta_2 INF + \beta_3 INT + \beta_4 LDR + \beta_5 EXR + \mu \qquad (3)$$

Where; UEMP is unemployment, CBCR is commercial bank credit, INF is inflation rate, INT is interest rate, LDR is lending rate, EXR is exchange rate and β_0 is intercept or a constant term. More so, β_1, β_2, β_3, β_4, and β_5 are the coefficients of commercial bank credit (CBCR), Inflation rate (INF), interest rate (INT), lending rate (LDR), and exchange rate (EXR) respectively (which are also the parameters to be estimated). μ = stochastic or error term.

3.3 Method of Data Analysis

This study employed the autoregressive distributed lag (ARDL) estimation method to analyze equation (3). The ARDL techniques enable the study to analyze both the long-term and short-term estimate simultaneously. More so, the ARDL allow the estimation of variables with different order of integration such as I(0) and 1(1) series.

4 Results and Discussion

4.1 Descriptive Statistics

This study commenced its empirical analysis by checking for the descriptive characteristics of data used in the model. The results of the descriptive statistics are shown in Table 1 below. In the table, it was revealed that, the mean values of unemployment (UEMP), commercial bank credit (CBCR), inflation rate (INF), interest rate (INT), lending rate (LDR) and exchange rate (EXR) are 3.44, 6.95, 21.45, 6.31, 17.37 and 151.39 respectively. The median value of unemployment (UEMP), commercial bank credit (CBCR), inflation rate (INF), interest rate (INT), lending rate (LDR) and exchange rate (EXR) are 3.88. 6.32, 11.12. 6.78, 16.94 and 100.58 respectively.

The standard deviation showed that exchange rate (EXR) is most volatile variable (117.77), showing that the observation from exchange rate is far from the sample mean while commercial bank credit (CBCR) is the least volatility variable (1.12) showing the variable is close to the sample mean. The skewness statistics showed that only interest rate (INT) was negatively skewed although in absolute value it is normally distributed. The remaining variables unemployment (UEMP), commercial bank credit (CBCR), inflation rate (INF), lending rate (LDR) and exchange rate (EXR) are positively skewed. The Jarque-Bera statistic accepted the null hypothesis of normal distribution for three (3) variables - commercial bank credit (CBCR), inflation rate (INF), and exchange rate (EXR) at 5% level of significance and rejected the null hypothesis of normal distribution for three (3) variables - unemployment (UEMP), interest rate (INT) and lending rate (LDR).

Table 1: Descriptive statistics Table

	UEMP	CBCR	INF	INT	LDR	EXR
Mean	3.444512	6.95E+12	21.44787	6.314442	17.37160	151.3957
Median	3.876000	6.32E+11	11.11892	6.777500	16.93917	100.5760
Std. Dev.	2.578318	1.12E+13	34.70035	2.776057	4.927452	117.7697
Skewness	0.335986	1.636362	4.745691	-0.569006	0.232872	1.784395
Jarque-Bera	0.771426	22.67261	1146.376	2.575623	0.900861	31.71512
Probability	0.679966	0.000012	0.000000	0.275874	0.637354	0.000000
Observations	41	41	41	41	41	41

Source: Authors computation using EViews 10 2023.

4.2 Unit Root and Co-integration Tests

As a follow up of the outcome of the descriptive statistics of the variables, the study checked for the time series properties of the variables using the Augmented Dickey-Fuller (ADF) test. The results presented on Table 2 indicated that all variables unemployment (UEMP), commercial bank credit (CBCR), inflation rate (INF), interest rate (INT), lending rate (LDR) and exchange rate (EXR) were stationary at first difference since their probability value are less than 0.05, which implies that the variables are integrated of order 1.

Table 2: Unit Root

Augmented Dickey Fuller Test						
	AT LEVEL			AT FIRST DIFFERENCE		
Variable	t-statistics	Prob. Value	Status	t-statistics	Prob. Value	Status
UEMP	1.490657	0.9642	I (0)	-5.648060	0.0000	I (1)
CBCR	2.672165	1.0000	I (0)	-5.518117	0.0003	I (1)
INF	-6.833625	0.1500	I (0)	-17.83960	0.0000	I (1)
INT	-2.845500	0.1902	I (0)	-6.767603	0.0000	I (1)
LDR	-2.009497	0.1789	I (0)	-5.811450	0.0001	I (1)
EXR	-2.027463	0.5694	I (0)	-4.401140	0.0060	I (1)

Source: Authors computation using EViews 10 2023.

The co-integration test conducted using the auto-regressive distributed lag bound test showed that with the assumption of strong exogeneity on all variables, the hypothesis of the existence of long run relationship is rejected at 5% significance level because the value of the F-Statistics for bound test model (2.27) is lower than the lower bound value (2.39). Therefore, the co-integration test showed the absence of long-run relationship between the dependent variable (UEMP) and the independent variables (CBCR, INF, INT, LDR, EXR).

Test Statistics	Value	K
F-Statistics	2.27	5
Critical Value Bounds		
Significance	**I (0) Bound**	**I (1) Bound**
5%	2.39	3.38

Source: Author's computation with e-views 10.

4.3 Regression Estimate

Sequel to the absence of long run relationship among the variables as indicated by the co-integration estimate, this study presents the short run estimate on the relationship between commercial bank credit and unemployment rate in Nigeria. From Table 3, it is observed that commercial bank credit (CBCR) had a negative and significant influence on unemployment rate (UEMP). Statistically, it was observed that a one-per cent increase in (CBCR) is expected to decrease unemployment rate by about less than one per cent in the short run. The findings of this study negate the result of Nnabu et al. (2017), which found out that commercial bank credit has no significant influence on unemployment reduction in Nigeria. More so, the results showed that inflation rate (INF) contributed significantly in increasing unemployment rate in Nigeria. Statistically, a one per cent increase in inflation rate is expected to increase unemployment rate by 17.1 per cent in the short run. In addition, the estimate showed that interest rate (INT), lending rate (LDR) and exchange rate (EXR) had insignificant influence on unemployment in the short run in the period under study

In addition, the regression estimate showed that F-statistic is 67.86175 while the Prob(F-statistic) is 0.0000, which indicates that the combined influence of the exogenous variables on the dependent variable is statistically significant. The results also showed that multiple coefficients of determination, R^2 is 0.907. The result indicated that about 91% of the variations in the dependent variable (UEMP) are explained by the exogenous variables (CBCR, INF, INT, LDR and EXR) while the remaining 9% is attributed to other factors not included in the model. Furthermore, the results revealed Durbin Watson (DW) statistic of 1.9197, which implies that serial correlation is not found in the model.

Table 4. Regression Estimate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.766148	0.928413	-0.825223	0.4154
D(CBCR)	-7.09E-14	1.90E-14	-3.721924	0.0008
D(INF)	0.1707798	0.040787	4.187540	0.0002
D(INT)	-0.004692	0.066175	-0.070901	0.9439
D(EXR)	-0.000255	0.001507	-0.168927	0.8669
D(LDR)	-0.032862	0.048857	-0.672619	0.5060
CointEq(-1)*	-0.316472	0.061922	-5.110812	0.0000
R-squared	0.906888	F-statistics		67.86175
Adjusted R-squared	0.830822	Prob (F-statistics)		0.000000
		Durbin-Watson stat		1.919711

Source: Authors Computation using E-views 10, 2023.

4.4 Post Estimation Analysis

Breusch-Godfrey Serial Correlation LM Test

Since the probability value is higher than 5% significant level, this indicates that the null hypothesis of serial correlation is rejected which implies that there is no serial correlation and the model is normally distributed.

Table 5. Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.067217	Prob. F(1,31)	0.7971
Obs*R-squared	0.086544	Prob. Chi-Square(1)	0.7686

Source: Authors Computation using E-views 10, 2023.

Histogram-Normality Test

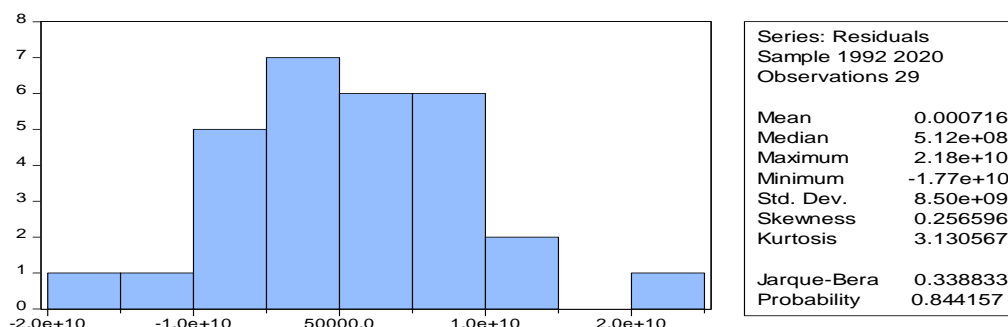From the diagram below it is observed that the probability value of Jarque-Bera is higher than 5% hence the hypothesis of normal distribution for residual cannot be rejected and the model is said to be normally distributed.

Figure 1: Histogram-Normality Test

Source: Authors' Computation using E-views 10, 2023.

5. Conclusion and Recommendations

This study examined the relationship between commercial bank credit and unemployment rate in Nigeria. The study covered the period 1981 to 2021 and employed the auto-regressive distributed lag technique in estimating the model. The estimates showed that commercial bank credit and inflation rate significantly influenced unemployment, while other variables - interest rate, lending rate, and exchange rate had no significant influence on unemployment. Based on these findings, the study concluded that commercial bank credit significantly drives unemployment rate in Nigeria. Thus, the study recommends that credit by commercial bank should be significantly increased and properly channeled to productive investment in order to contribute to reducing unemployment rate in Nigeria. More so, there is the need to curtail the persistent raise in inflation rate through appropriate monetary and fiscal policies.

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